

**CLAIMS**

What is claimed is:

1. A method for managing resources within a distributed  
5 data processing system, the method comprising:

receiving a request for an action at a target  
resource within the distributed data processing system,  
wherein completion of the action depends upon operations  
of a set of resources along a logical route through the  
10 distributed data processing system;

in response to a determination that completion of  
the action requires that the set of resources operate at  
high levels of performance, securing operating conditions  
within the distributed data processing system for high  
15 levels of performance by the set of resources and the  
target resource; and

in response to securing high level performance  
conditions, granting the request for the action.

- 20 2. The method of claim 1 further comprising:

rejecting a subsequent request for an action that  
requires operations on one of the resources in the set of  
resources.

- 25 3. The method of claim 1 further comprising:

reserving exclusive access to the set of resources  
and the target resource.

4. The method of claim 3 further comprising:  
generating a restricted session identifier;  
associating the restricted session identifier with  
the granted action;

5 transmitting the restricted session identifier to  
gateways responsible for the set of resources, wherein  
gateways along the route permit exclusive access to the  
set of resources in accordance with the restricted  
session identifier associated with an action.

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5. The method of claim 1 further comprising:  
deriving a set of logical routes from a network  
topology mapping, wherein each logical route is a series  
of endpoints that comprise an endpoint-to-endpoint route  
15 for completing the requested action.

6. The method of claim 5 further comprising:  
selecting the logical route, wherein the logical  
route does not include resources for which exclusive  
20 access has previously been granted.

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7. An apparatus for managing resources within a distributed data processing system, the apparatus comprising:

receiving means for receiving a request for an  
5 action at a target resource within the distributed data processing system, wherein completion of the action depends upon operations of a set of resources along a logical route through the distributed data processing system;

10 securing means for securing, in response to a determination that completion of the action requires that the set of resources operate at high levels of performance, operating conditions within the distributed data processing system for high levels of performance by  
15 the set of resources and the target resource; and

granting means for granting, in response to securing high level performance conditions, the request for the action.

20 8. The apparatus of claim 7 further comprising:  
rejecting means for rejecting a subsequent request for an action that requires operations on one of the resources in the set of resources.

25 9. The apparatus of claim 7 further comprising:  
reserving means for reserving exclusive access to the set of resources and the target resource.

10. The apparatus of claim 9 further comprising:  
generating means for generating a restricted session  
identifier;

5 associating means for associating the restricted  
session identifier with the granted action;

transmitting means for transmitting the restricted  
session identifier to gateways responsible for the set of  
resources, wherein gateways along the route permit  
exclusive access to the set of resources in accordance  
10 with the restricted session identifier associated with an  
action.

11. The apparatus of claim 7 further comprising:

15 deriving means for deriving a set of logical routes  
from a network topology mapping, wherein each logical  
route is a series of endpoints that comprise an  
endpoint-to-endpoint route for completing the requested  
action.

20 12. The apparatus of claim 11 further comprising:

selecting means for selecting the logical route,  
wherein the logical route does not include resources for  
which exclusive access has previously been granted.

13. A computer program product in a computer readable medium for use in a data processing system for managing resources within a distributed data processing system, the computer program product comprising:

5 instructions for receiving a request for an action at a target resource within the distributed data processing system, wherein completion of the action depends upon operations of a set of resources along a logical route through the distributed data processing  
10 system;

instructions for securing, in response to a determination that completion of the action requires that the set of resources operate at high levels of performance, operating conditions within the distributed  
15 data processing system for high levels of performance by the set of resources and the target resource; and

instructions for granting, in response to securing high level performance conditions, the request for the action.

20 14. The computer program product of claim 13 further comprising:

instructions for rejecting a subsequent request for an action that requires operations on one of the  
25 resources in the set of resources.

15. The computer program product of claim 13 further comprising:

instructions for reserving exclusive access to the  
30 set of resources and the target resource.

16. The computer program product of claim 15 further comprising:

instructions for generating a restricted session identifier;

5 instructions for associating the restricted session identifier with the granted action;

instructions for transmitting the restricted session identifier to gateways responsible for the set of resources, wherein gateways along the route permit  
10 exclusive access to the set of resources in accordance with the restricted session identifier associated with an action.

17. The computer program product of claim 13 further comprising:

instructions for deriving a set of logical routes from a network topology mapping, wherein each logical route is a series of endpoints that comprise an endpoint-to-endpoint route for completing the requested  
20 action.

18. The computer program product of claim 17 further comprising:

instructions for selecting the logical route,  
25 wherein the logical route does not include resources for which exclusive access has previously been granted.